

NEW RECORDS OF THE GENUS *STENUS* LATREILLE (COLEOPTERA: STAPHYLINIDAE) IN AUSTRALIA

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Abstract

Recent Australian records of the genus *Stenus* Latreille are listed and biological notes given. Three species are newly recorded from the Australian Capital Territory, two from Western Australia and one from the Northern Territory.

Introduction

The almost cosmopolitan genus *Stenus* Latreille is one of the largest in the animal kingdom, with about 2000 species. The adults are diurnal predators on soil and leaf surfaces, usually near water, and the larvae are active predators on soil surfaces. The adults, with large bulging eyes, a protrusible labium (Weinreich 1968; Fig. 1) and the peculiar stiff-legged gait of creatures that hunt by stealth, are easily distinguished in the field and make a popular subject for collectors in the northern hemisphere. In the north, small regions such as the British Isles have large, diverse faunas (74 species) and the small scale distribution patterns of species may be correlated with changes in soil type and management systems of grasslands and riverbanks (Allen 1981; Reid 1985, unpubl.).

The Australian fauna has been revised relatively recently (Puthz 1970, 1972, 1975, 1977) and comprises only 29 species. A considerable amount of new material has accumulated in the Australian National Insect Collection, Canberra (ANIC) since Puthz last worked on the Australian fauna. This paper is a record of this new material, and small collections in the Queensland Museum (QM), University of Queensland Insect Collection (UQIC), Queensland Department of Primary Industries, Mareeba (QDPIM) and Zoology Department, James Cook University, Townsville (JCU).

The species are listed in alphabetical order, ignoring subgenera, with notice of new material and notes on distribution and habitat where appropriate. An asterisk (*) indicates new state records. All material is in the ANIC unless otherwise indicated.

Records

Stenus atrovirens Fauvel

*NORTHERN TERRITORY: 3/ Jim Jim Creek, 12°57'S 132°33'E, 19 km WSW Mount Cahill, 24.x.1972 E.B. Britton. QUEENSLAND: 2/ Barron River, Walkamin, 4.vi.1964, RE (QDPIM).

This appears to be a rare species, previously known only from tropical Queensland (Puthz 1970, 1972: 8 specimens).

Stenus australicus Blackburn

No additional material.

This species is still known only from the female holotype, collected at Wandiligong (Puthz 1970), a lowland valley in the Victorian Alps.

Stenus bifenestratus Benick

WESTERN AUSTRALIA: 2/ Forest Dept, 18-22.x.1971, J.A. Springett; 3/ Marri Road, Forest Dept, 8-21.vii.1970, J.A. Springett; 1/ 7 km SE Dwellingup, 32°46'S 116°04'E, 2.x.1981, I.D. Naumann, J.C. Cardale.

This is a frequently recorded species in the more humid forests of south-western Western Australia (Puthz 1970).

Stenus bisignatus Puthz

WESTERN AUSTRALIA: 1/ Pemberton, 3.xii.1936, K.R. Norris.

Previously known from the female holotype, which was also collected at Pemberton (Puthz 1977).

Stenus caviceps Fauvel

No additional material.

This is a widespread species on Cape York Peninsula, north of Cairns (Puthz 1970, 1972).

Stenus coeruleus Waterhouse

NEW SOUTH WALES: 1/ Allyn River Road, 7.6 km from Singleton, 28.vi.1976, W. Allen; 5/ Barrengarry Mountain, 34°40'S 150°30'E, on bushes over ditch, 12.viii.1989, C. Reid; 3/ Barrington House, 92 km NW Singleton, 32°09'S 151°32'E, 28.vi.1976, W. Allen; 4/ Barrington Tops NP, Gloucester River, 32°04'S 151°41'E, 12-14.xi.1981, A. Calder; 1/ 16.5 km S Bermagui, Brochelos Creek, 22.vii.1973, Z. Liepa; 1/ 38.5 km WSW Corumba, 30°14'S 152°43'E, 26.vi.1976, W. Allen; 5/ 3 km N Lansdowne, via Taree, wet scler[ophyll] forest, 20.ix.1983, 24.xi.1984, 21.vi.1985, G. & B. Williams; 3/ Lismore, iii.1922; 1/ Richmond River, 1909-174; 1/ Wallaga Lake, Bermagui, 21.vii.1973, Z. Liepa. QUEENSLAND: 3/ Baldwin Swamp Fauna reserve, 10.x.1972, H. Frauca; 2/ Lake Eacham, 19.viii.1934; 1/ [Lamington] National Park, MacPherson Range, i.1928, H.J. Carter; 1/ c12 km E Ravenshoe, 27.viii.1968, R.J. Elder; 3/ Tinaroo, on wild tobacco, 21.xii.1968, P.H. Twine (QDPIM); 1/ Woombye, nr Nambour, 16.x.1965, D.H. Colless.

This is a common species in rainforest from Clyde River, New South Wales, northwards. It is an active climber on trees and shrubs.

Stenus convexiusculus Benick

No additional material.

This species is known only from high rainfall areas of northern New South Wales and southern Queensland (Puthz 1970, 1972: 10 specimens).

Stenus cupreipennis Macleay

No additional material.

Apparently a common riparian species, which is recorded from Adelaide and Melbourne to Cape York (Puthz 1970, 1972).

Stenus cursorius cursorius Benick

NORTHERN TERRITORY: 3/ Adelaide River, Daly River Rd Xing, 13°29'S 131°06'E, 9.xi.1972, E.B. Britton; 1/ Burrell's Creek, Stuart Highway, 24.xi.1972, D.H. Colless; 3/ Cooper Creek, 19 km SE Mount Borradaile, 12°06'S 133°04'E, stagnant pool in sandy creek bed, 3.xi.1972, E.B. Britton; 11/ Fergusson River, 19°14'S 131°50'E, 7.viii.1968, 13.viii.1968, M. Mendum; 2/ Wilderness River Lagoon, 12°58'S 132°00'E, 24.x.1972, E.B. Britton. QUEENSLAND: 5/ Bakers Blue Mtn, 17 km W Mt Molloy, rainforest, 1100m, 12.ix.1981, G. Monteith & D. Cook (QM); 1/ Bellenden Ker Range, 17°16'S 145°51'E, summit TV stn, rainforest litter, 1500m, 25-31.x.1981, Earthwatch & QM (QM); 2/ Bellenden Ker, 17°16'S 145°51'E, centre peak summit, moss on trees, 10-11.iv.1979, G.B. Monteith (QM); 1/ Cairns, freshwater flood debris, 18.iii.1965, J.G. Brooks; 8/ Davies Creek, x.1950, GB; 2/ Davies Creek, 22 km WSW Mareeba, malaise trap, 2.xii-7.i.1985, Storey, Titmarsh (QDPIM); 1/ Eungella, near school, 9.v.1980, I.D. Naumann, J.C. Cardale; 1/ Lambs Head, 10 km W Edmonton, 1200m, 10.xii.1989, Monteith, Thompson, Janetzki (QM); 10/ Millstream Falls, Ravenshoe, sand by river, ix.1991, C. Reid; 1/ 12 km WNW Mossman, head of Francis Creek, 1200m, 30.xii.1989, ANZSES (QM); 1/ Mount Halifax, 19°07'S 145°23'E, summit heath, 21.iii-10.v.1991, D. Cook (QM); 1/ Mount Lewis, 1060m, 20.vi.1971, Taylor, Feehan; 1/ Mount Lewis barracks, via Julatten, rainforest litter, 1000m, 10.ix.1981, G. Monteith & D. Cook (QM); 1/ Mount Misery, 15°52'S 145°14'E, summit, flight intercept, 850m, 17.i.1991, QM & ANZSES (QM); 1/ Mount Williams, 16°55'S 145°40'E, 1000m, 2.xii.1993, Monteith & Janetzki (QM); 1/ Murray Falls, N of Cardwell, on rocks by river, viii.1996, C. Reid; 3/ Silver Valley, ix.1950, GB; 1/ Taringa, 7.i.1931; 6/ Townsville, F.H. Taylor; 2/ Windsor Tableland, flt intercept, 27.xii-10.i.1989, E. Schmidt & ANZSES (QM). *WESTERN AUSTRALIA: 2/ Mining Camp, Mitchell Plateau, 14°49'S 125°50'E, 9-19.v.1983, I.D. Naumann, J.C. Cardale.

This is a widespread and abundant riparian and rainforest species in the northern tropics as far south as Rockhampton (Puthz 1970), newly recorded here from Western Australia.

Stenus gaydahensis Macleay

*AUSTRALIAN CAPITAL TERRITORY: 2/ Canberra, marshy pond by ANU campus & Clunies Ross St, 19.ix.1985, C. Reid. NEW SOUTH WALES: 1/ 18 km SW Braidwood, marshy stream, 30.i.1986, C. Reid; 2/ Darling River, v.1925, H.J. C[arter] (1 Puthz coll.); 1/ Wambelong Creek, Warrumbungle NP, 31°19'S 148°59'E, 8.i.1977, S. Allen. QUEENSLAND: 3/ Archer Creek, x.1953, GB; 2/ Broken River, 50 mi W Mackay, 30.xi.1968, E. B. Britton (1 Puthz coll.); 4/ Dargonelly Rockhole, 25°02'S 147°54'E, 27.ii.1996, G. Monteith & C. Burwell (QM); 1/ Blackdown Tableland via Dingo, 850-950m, 11-12.iv.1996, G. Monteith (QM).

This plant climbing species in marshy habitat (with many emergent plants), is widely distributed from southern New South Wales to north Queensland.

Stenus guttulifer Waterhouse

No additional material.

This species is widespread in the more humid regions of southwestern Western Australia (Puthz 1970, 1972). Nineteenth century records from Queensland and New South Wales are probably erroneous.

Stenus hornensis Puthz

No additional material.

Still known only from the female holotype, Horn Island, Northern Territory (Puthz 1970).

Stenus immaculatus Puthz

WESTERN AUSTRALIA: 3/ Pemberton, Brockman NP, karri forest, 26.x.1969, R.W. Taylor; 3/ Pemberton, 23.ix.1971, J.A. Springett; 1/ 12 mi N Walpole, c250m, marri forest, 24.x.1969, R.W. Taylor.

This species is confined to the small high rainfall area of southwestern Western Australia. It was previously known only from the female holotype, collected in Walpole-Nornalup NP.

Stenus improbus Puthz

QUEENSLAND: 1/ Bellenden Ker Range, cableway base stn, pyrethrum knockdown, 100m, 17.x-9.xi.1981, Earthwatch & QM (QM); 1/ Cairns, freshwater flood debris, 18.iii.1965, J.G. Brooks.

This rare species was previously known from the holotype (Cairns) and four northern Queensland specimens in the Blackburn collection (Puthz 1970, 1972). It is possibly confined to lowland rainforest.

Stenus janthinipennis Lea

No additional material.

A riparian species, which is common in the Kimberleys and near Darwin (Puthz 1970, 1972).

Stenus leai Bernhauer & Schubert

No additional material.

Apparently a rare species, which is known from the Kimberleys and northern Queensland (Puthz 1970).

Stenus macellus Fauvel

No additional material.

The species is still known only from 6 nineteenth century specimens collected at Albany, in SW Australia (Puthz 1970).

Stenus maculatus Macleay

NEW SOUTH WALES: 2/ Broulee, 35°51'S 150°11'E, 26.v.1982, T. Watson, L. Miller; 1/ Mebbin SF, 18 km W Uki, 23-24.xi.1982, J. Doyen; 1/ Victoria Park via Alstonville, 1.xi.1970, G.B. Monteith (UQIC). QUEENSLAND: 1/ Brookfield, 10.ix.1933, J.G. Brooks; 1/ Conway State Forest, Brandy Creek Rd, 23.iv.1979, G.B. Monteith (QM); 1/ Granite Creek, Bulburin State Forest via Many Peaks, 1.iv.1972, G.B. Monteith (UQIC); 2/ Greater Brisbane, Wassel; 1/ Joalah NP, Tambourine Mountain, 27°56'S 153°12'E, on flowers & foliage, 18-21.x.1978, Lawrence & Weir; 1/ Mount Nebo, 10.xii.1933, J.G. Brooks; 1/ c3 km W Paluma, c888m, ex leaf litter, 11.i.1975, J.G. Brooks; 1/ Mount Irvine; 1/ Redland Bay, ix.1950, GB; 1/ Seaview Range, Mt Fox Rd, rainforest, 600m, 2.i.1987, S. Hamlet (QM).

The localities listed above and those given by Puthz (1970, 1972) suggest that this is a subtropical and tropical rainforest species, not a species "of open forest" (Puthz 1970: 75), occurring from Clyde River, New South Wales, northwards. It is not present in the cooler rainforest preferred by the similar *S. pustulifer* Fauvel. The species climbs low vegetation.

Stenus nevoissi Puthz

No additional material.

This species is known only from the 4 type specimens, collected in Cairns and Halifax, North Queensland (Puthz 1970).

Stenus olivaceus Macleay

No additional material.

A widely distributed riparian species, recorded from southern New South Wales to Cairns (Puthz 1970, 1972).

Stenus piliferus obesulus Fauvel

NEW SOUTH WALES: 1/ 1 km S Harrington, swept Casuarina & Acacia complex, 21.ix.1983, G. Williams. NORTHERN TERRITORY: 1/ 3 km SSW Katherine, 14°30'S 132°15'E, 12.xi.1979, T. Weir; 19/ Muirella Park, 12.x.1972, E.F. Riek. QUEENSLAND: 4/ Arriga, Mareeba, ex rice paddy, 16.iv.1985, K.H. Halfpapp (QDPIM); 13/ Didgeridoo Waterhole, Baratta Creek, viii.1991, Burdekin River Project (JCU); 4/ Innisfail, 5.ix.1965, R. Angus (1 Puthz coll.); 1/ 2 mi SW Mount Inkerman, 19°45'S 147°30'E, mud, lily ponds, 11.xii.1968, Britton & Misko. VICTORIA: 1/ East Pombornheit, 24 km ESE Camperdown, temporary pond, viii.1978-ii.1979, P.S. Lake. *WESTERN AUSTRALIA: 1/ 14 km SE Kalumburu Mission, CALM site 4/3, 12°45'S 126°40'E, 3-6.vi.1988, T.A. Weir.

A common riparian vegetation climber, from southern South Australia to the eastern and northern seaboard of Australia (Puthz 1970, 1972), not previously recorded from Western Australia.

Stenus platythrix Puthz

QUEENSLAND: 1/ 2 km S Beatrice River, 17°34'S 145°41'E, rainforest pitfalls, 1.xii-25.ii.1994, J. Hasenpusch (QM); 1/ 4 km up Black Mountain Road, Kuranda, malaise trap, 25.viii.-14.ix.1982, G. Simpson; 1/ Mount Lewis via Julatten, 3500', 4.v.1970, G.B. Monteith (UQIC); 2/ same locality, rainforest, 12.x.1980 (QM).

This is a fairly common species, confined to the region around Cairns and the Atherton Tableland, North Queensland (Puthz 1970, 1972).

Stenus praedictus Puthz

QUEENSLAND: 1/ Bellenden Ker Range, Cable Tower 3, beating rainforest, 1054m, 17.x-5.xi.1981, Earthwatch & QM; 1/ Crater, vii.1969, GB; 1/ Crater National Park, Atherton Tableland, 950m, pyrethrum, 28.xii.1990, G.B. Monteith (QM); 1/ Kirrima Range via Kennedy, rainforest, 500m, 2.x.1980, G.B. Monteith (QM); 2/ Malanda Falls, Malanda, rainforest, 750m, 8-12.x.1980, G.B. Monteith (QM); 2/ Mount Lewis, ix.1969, GB; 1/ Mount Lewis via Julatten, 3500', 4.v.1970, G.B. Monteith (UQIC).

The above records indicate that this species is widely distributed, in high rainfall and relatively high altitude areas of North Queensland, from Kirrima Range to Mount Lewis (Puthz 1975, 1977).

Stenus pseudocoeruleus Puthz (Fig.1)

QUEENSLAND: 2/ Cairns, 18.xi.1934, J.G. Brooks; 1/ Mount Weib NP, 15°04'S 145°07'E, 28-30.ix.1980, T. Weir; 13/ Russel River, Bellenden Ker landing, 5m, beating rainforest, 24.x-9.xi.1981, Earthwatch & QM; 2/ Bellenden Ker Range, cableway base stn, beating rainforest, 100m, 17.x-9.xi.1981, Earthwatch & QM (QM); 1/ same locality, 8.iv.1987, E.C. Dahms & G. Sarnes (QM); 1/ Smithfield, 16°49'S 145°41'E, beating rf trees, 22.v.1997, C. Reid (ANIC); 3/

South Johnstone Research Station, on banana frond, 15.viii.1990, K.H. Halfpapp (QDPIM); 1/ South Johnston, off banana plant, 19.vi.1970, B. Franzmann (QDPIM); 1/ Tully, on leaf *Musa cavendishii*, 19.viii.1970, B. Franzmann (QDPIM); 1/ Yarrabah, 17.v.1976, E.B. Britton.

This active plant climber is a common species of high rainfall areas in North Queensland, with an isolated record from northern New South Wales (Puthz 1970: Eungai).

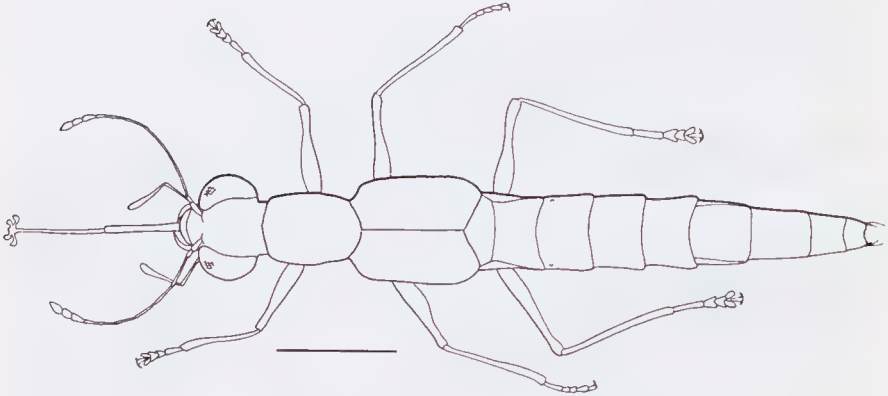


Fig. 1. *Stenus pseudocoeruleus* Puthz, male, with labium extended. Scale bar = 1 mm.

Stenus puncticollis Fauvel

*AUSTRALIAN CAPITAL TERRITORY: 1/ Canberra, Sullivan's Creek, mud & reeds, 18.ii.1985, C. Reid; 1/ Uriarra Crossing, 30.xii.1985, K.R. Pullen. VICTORIA: 3/ Churchill NP, under bark, 12.vi.1973, P.J. Parsons.

A common riparian species, which occurs from Victoria to Brisbane, with old material from Cairns (Puthz 1970). It is evidently capable of overwintering under bark.

Stenus pustulifer Fauvel

*AUSTRALIAN CAPITAL TERRITORY: 2/ Brindabella Range, Blundells Creek-Lees Creek area, 35°22'S 148°50'E, 1979-1981, C.R. Dickman; 1/ Tidbinbilla Reserve, 21.iii.1971, K.R. Pullen; 1/ Tidbinbilla NR, 2 km S Tidbinbilla Mountain, leaf litter, rainforest gully, 24.xi.1990, C. Reid. NEW SOUTH WALES: 1/ 22 km N Armidale, 30°31'S 151°32'E, 4.x.1971, S. Misko; 3/ Barrangarry Mountain, 34°41'S 150°31'E, 24.vi.1971, S. Misko; 1/ Barrington House via Dungog, 14.viii.1970, G.B. Monteith (UQIC); 1/ Beaumont, W side of valley, 20.ii.1974, S. Misko; 1/ Brown Mountain, rainforest at summit lookout, 5.xi.1987, C. Reid; 1/ Clyde Mountain, 750m, 26.x.1982, J. Doyen, J. F. Lawrence; 1/ Gloucester River, Barrington Tops NP, 32°04'S 151°41'E, 12-14.xi.1981, T. Weir; 3/ Macquarie Pass, 7 km ENE Robertson, 34°34'S 150°40'E, 8.ii.1984, I.D. Naumann; 1/ Monga SF, 35°35'S 149°55'E, 26.xi.1979, Lawrence & Weir; 1/ Mount Flora, nr Mittagong, 34°22'S 150°26'E, 15.iv.1976, R.W. Taylor; 1/ Mount Keira, 4.xi.1956, E.F. Riek; 2/ 2 km W Mount Keira, rainforest shrub, 30.iii.1990, C. Reid; 1/ New England NP, Point Lookout, 5,200', 10.xi.1968, C.W. Frazier; 1/ Mount Tomah, Blue Mountains, 4.xii.1971, G.B. Monteith (UQIC); 1/ Upper Allyn River, 14.ii.1968, D.H. Colless; 1/ Wadbilliga NP, 22 km NE Nimmitabel, grass under *Leptospermum*, vi.1988, C. Reid. QUEENSLAND: 1/ Brisbane, 20.v.1964, H.A. Rose (UQIC); 1/ Mount Bithongabel,

Lamington NP, 4.xi.1989. G. Monteith (QM); 1/ Spicer's Peak summit, 28°06'S 152°24'E, 1200m, 30-31.xii.1993, G.B. Monteith (QM); 1/ nr The Crater, 18 km N Ravenshoe, 17°27'S 145°29'E, 28-29.xi.1981, J. Balderson.

This is a common species of cool temperate to subtropical rainforest and wet sclerophyll forest, from Victoria to south Queensland, with isolated occurrences further north at Eungella and Ravenshoe. The species generally occurs in cooler forest at higher altitude than the morphologically similar *S. maculatus* Macleay. It climbs low vegetation and overwinters in grass-tufts and moss.

The female specimen from Mount Bithongabel (Qld) has proportionally shorter elytra, narrowed at base, covering short wings (1.5 times elytral length), and has first four tergites more sparsely punctured (almost impunctate), compared with the other material. It may represent a new species or a brachypterous morph of *S. pustulifer*.

Stenus retitogatus Puthz

NORTHERN TERRITORY: 2/ Delamere, 20-25.v.1968, M. Mendum. QUEENSLAND: 2/ McLeod River, 6.viii.1969, J.G. Brooks.

This is a rarely collected riparian species of the drier parts of tropical Queensland and the Northern Territory, previously known from the 3 type specimens (Puthz 1970).

Stenus villosiventris Lea

NEW SOUTH WALES: 1/ Pearl Beach, muddy creek in rainforest, xi.1984, C. Reid.

This is a fairly common species in Victoria and the Sydney region (Puthz 1970, 1972), which has also been recorded from Cairns and Western Australia (Puthz 1970), both probably erroneous localities.

Discussion

In Britain I was a keen collector of this genus and had collected more than 60 species, so when I came to Australia in 1984 I was sure that I would find many new species. My research here on Chrysomelidae has not allowed a serious investigation of suitable habitats for *Stenus*, but I have looked for *Stenus* species whenever possible. In 12 years only 6 species have been collected, none new to science. Areas of bare riparian mud which would support many species in the northern hemisphere, have been examined in many inland regions of Australia and in the Perth area, without success. Grasslands in the Canberra area have failed to produce any species and I have found nothing in the alpine regions of southern Australia, except *S. pustulifer* which is not recorded above 1200m. Tasmania has also been searched unsuccessfully for *Stenus* species and, like New Zealand, this island remains *Stenus*-less. In contrast, in nearby Java, *Stenus* species are diverse and abundant in submontane forests (pers. obs.).

In Australia, *Stenus* species are relatively rare and ecologically insignificant. The highest diversity of species is in the wet tropics of north Queensland. At least 16 of the 29 Australian species occur there, a few of which are common

diurnal predators on the leaves of rainforest bushes, with others common on bare ground by water.

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